Heterogeneously catalyzed partial gas phase oxidation of propene to acrylic acid

Abstract

In a process for heterogeneously catalyzed partial gas phase oxidation of propene to acrylic acid, the propene-containing starting reaction gas mixture is oxidized in a first reaction stage using a fixed catalyst bed 1 which consists of a plurality of fixed catalyst bed zones and is accommodated in two successive temperature zones A, B, and the acrolein-containing product gas mixture of the first reaction stage is then oxidized in a second reaction stage using a fixed catalyst bed 2 which consists of a plurality of fixed catalyst bed zones and is accommodated in two successive temperature zones C, D, and the transition from one temperature zone to another temperature zone within one reaction stage does not spatially coincide with a transition from one fixed catalyst bed zone to another fixed catalyst bed zone.